CLAIMS

1. A gas-barrier laminate comprising a plastic substrate (A), an inorganic thin film (B) formed on at least one surface of the plastic substrate (A), and a polyester-based resin layer (C) formed by applying a coating material containing a polyester-based resin on a surface of the inorganic thin film (B), said polyester-based resin having a glass transition temperature of 50 to 70°C, a molecular weight of 1500 to 15000 and a hydroxyl value of 10 to 60 mg KOH/g, and said gas-barrier laminate having an oxygen permeability of not more than 5 $cc/m^2/day/atm$ and a water vapor permeability of not more than 5 $g/m^2/day$.

2. A gas-barrier laminate according to claim 1, wherein the plastic substrate (A) comprises a polyester resin, a nylon resin, a polyolefin resin or a biodegradable resin.

3. A gas-barrier laminate according to claim 1 or 2, wherein the coating material contains a fatty acid, a fatty ester, a fatty amide or a mixture thereof in an amount of 0.1 to 20 parts by weight based on 100 parts by weight of the polyester-based resin.

4. A gas-barrier laminate according to any one of

claims 1 to 3, wherein the coating material contains a polyisocyanate as a curing agent.

5. A gas-barrier laminate according to claim 4, wherein a content of the polyisocyanate in the coating material is 0.8 to 1.5 times a hydroxyl equivalent of the polyester-based resin.

6. A gas-barrier laminate according to any one of claims 1 to 5, wherein the inorganic thin film (B) has a thickness of 0.5 to 40 nm.

7. A gas-barrier laminate according to any one of claims 1 to 6, wherein the inorganic thin film (B) is a physically vapor-deposited film or a chemically vapor-deposited film comprising silicon oxide, aluminum oxide, diamond-like carbon or a mixture thereof.

8. A gas-barrier laminate according to any one of claims 1 to 7, further comprising an anchor coat layer disposed between the plastic substrate (A) and the inorganic thin film (B).

9. A gas-barrier laminate according to claim 8, wherein the anchor coat layer comprises at least one material

selected from the group consisting of a polyester-based resin, an urethane resin, an acrylic resin and an oxazoline group-containing resin.

10. A gas-barrier laminate according to any one of claims 1 to 9, further comprising a printed layer formed on a surface of the polyester-based resin layer (C), and a heat seal layer formed on a surface of the printed layer.

11. A gas-barrier laminate according to claim 10, further comprising at least one paper or plastic film disposed between the printed layer and the heat seal layer.

12. A gas-barrier laminate according to any one of claims 1 to 11, wherein after forming the inorganic thin film (B) on the plastic substrate (A) or on the anchor coat layer formed on the plastic substrate (A), the resultant laminate is heat-treated at a temperature of not less than 60°C, and then the coating material containing the polyester-based resin is applied onto the inorganic thin film (B) to form the polyester-based resin layer (C) thereon.

13. A gas-barrier laminate according to any one of claims 1 to 12, wherein when the laminate is subjected to hydrothermal treatment under pressure at 120°C for 30 min, a

ratio of an oxygen permeability of the laminate before the hydrothermal treatment to that after the hydrothermal treatment is not more than 5.

14. A gas-barrier laminate according to any one of claims 1 to 13, wherein when the laminate is subjected to hydrothermal treatment under pressure at 120°C for 30 min, an adhesion strength between the plastic substrate (A) or the anchor coat layer formed on the plastic substrate (A) and the inorganic thin film (B) is not less than 100 g/15 mm.

15. A gas-barrier laminate according to any one of claims 1 to 14, wherein when the laminate is subjected to hydrothermal treatment under pressure at 120°C for 30 min, an adhesion strength between the printed layer or the polyester-based resin layer is not less than 100 g/15 mm.